

DETAILED ACTION

Response to Amendment

1. Acknowledgment is made of the amendment, filed March 26, 2008, to claim 1 to recite the features of claims 2 and 4, and the cancellation of claims 2 and 4 which are, therefore, no longer pending examination in this application.

Response to Arguments

2. Applicant's arguments, see page 6, line 20 through page 7, line 6, filed March 26, 2008 with respect to claim 1 have been fully considered and are persuasive. The rejection under 35 USC § 103(a) of claim 1 has been withdrawn.

However, the examiner still believes the instant application is unpatentable and, therefore, has cited new art in a new rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Henriksson (US 2004/0085891 A1) in view of Gossel (U.S. Patent No. 3,876,945).

Regarding claim 1:

As shown in figures 1-9, Henriksson discloses a method for processing a signal containing regular or quasi-regular elements of unwanted signal, the method comprising the steps of:

- (i) establishing timing characteristics of the unwanted signal elements in a portion of said signal (**see figure 2, reference character 202**);
- (ii) generating a time domain window function using said established timing characteristics (**see figure 2, reference characters 202 and 203**), said time domain window function being a window with cosine transitions (**see ¶ [0050]**); and
- (iii) applying the generated window function to said signal portion to selectively reduce the amplitude of said unwanted signal elements relative to other elements of said signal (**see figure 3 and ¶ [0010]**).

Henriksson does not specifically disclose having a sinusoidal window with zero crossings substantially coinciding with the position of each unwanted signal element.

However, Gossel discloses having a sinusoidal window with zero crossings substantially coinciding with the position of each unwanted signal element (**see figure 1 and col. 3, lines 23-37**).

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify the invention of Henriksson as taught by Gossel and have a sinusoidal window with zero crossings substantially coinciding with the position of each unwanted signal element, thus allowing interference suppression substantially to a theoretically optimum extent (**Gossel, col. 1, lines 52-55**).

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Henriksson in view of Gossel as applied to claim 1 above, and further in view of Daspit et al. (U.S. Patent no. 3,754,101).

Regarding claim 3:

The combination of Henriksson and Gossel discloses a method according to claim 1, further comprising the step of: (iv) applying a Fourier transform to the signal output from step (iii) (**see figure 2, reference character 206**). However, the combination of Henriksson and Gossel does not specifically disclose: (v) applying an algorithm to restore the shape of peaks in the transformed signal to an approximation of their form in the absence of said unwanted signal elements.

Daspit, however, discloses applying an algorithm to restore the shape of peaks in the transformed signal to an approximation of their form in the absence of said unwanted signal elements (**see col. 4, lines 21-24 and 40-44 where Daspit discusses double sideband suppressed carrier amplitude modulation**).

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify the invention of Henriksson and Gossel as taught by Daspit and apply an algorithm to restore the shape of peaks in the transformed signal to an approximation of their form in the absence of said unwanted signal elements, thus allowing the retaining of only the useful spectral elements (**Daspit, col. 4, lines 36-40**).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GINA MCKIE whose telephone number is (571)270-5148. The examiner can normally be reached on Mon-Fri, 9:00 AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shuwang Liu can be reached on 571-272-3036. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Gina McKie/
Examiner, Art Unit 2611
June 13, 2008
/Shuwang Liu/
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